

DETAILED ACTION

1. This Office action is in response to amendments filed 9/26/2008. It should be noted that claim 1 has been amended and claims 3, 17, 19-20, and 23 have been cancelled.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 8, 9, 14, 16, 18, 22, 24, 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Collings 6,176,688.

Collings discloses a hermetic compressor comprising a hermetic container 22 having an enclosed space formed therein; a motor part 34 provided in the hermetic container; a compression part 55 coupled to the motor part 34, wherein the compression part compresses low temperature, low pressure refrigerant into high temperature, high pressure refrigerant; a discharge muffler 70 positioned adjacent to the compression part (see Fig. 3A), wherein the discharge muffler attenuates noise generated by the refrigerant as it is compressed; a discharge pipe 134 that extends through a side of the hermetic container (see col. 6, line 43-47); a loop pipe 130,132 that extends from the discharge muffler 102 to the discharge pipe 134, wherein refrigerant discharged from the discharge muffler flows through the loop pipe 130,132

and is discharged from the hermetic container through the discharge pipe 134, wherein the loop pipe 130,132 includes a plurality, of bent portions (see Fig. 2); and at least one transit tube (see top portion of 134 that surrounds 132) coupled to an end of the loop pipe 130,132, wherein the at least one transit tube surrounds an outer circumferential surface of the end of the loop pipe 130,132 (see configuration in Fig. 2); wherein transit tube is coupled to a second end of the loop pipe 130,132, at a coupling between the second end of the loop pipe and the discharge pipe 134; wherein the hermetic container includes: a lower container 26 having a downward hollow; and an upper container 24 positioned on an upper rim of the lower container so as to form the enclosed space therebetween; wherein the lower container 26 has a hole extending through one side to receive the discharge pipe 134 fitted therethrough (see 26 in Fig. 2); wherein the compression part includes: a cylinder 52 having a space formed therein for compressing refrigerant; a piston 50 that reciprocates along an inner circumferential surface of the space formed in the cylinder; a valve assembly 61 that controls suction of refrigerant into and discharge of refrigerant from the space formed in the cylinder 52; and a connecting rod 48 that converts a rotation force generated by the motor part 34 into a reciprocating movement transmitted to the piston 50; wherein the valve assembly includes a head cover 54 that isolates refrigerant being drawn into the cylinder from refrigerant being discharged from the cylinder 52. Collings further comprising a pseudo-discharge muffler 70 positioned at a side of the compression part 55 which is opposite the side at which the discharge muffler 102 is positioned; wherein the pseudo-discharge muffler acts as a balance weight for the discharge muffler. Collings further comprising

supporting parts (see bottom of 26 in Fig. 1) provided on opposite sides of a bottom surface portion of the lower container; wherein the at least one transit tube (top portion of 134) forms a seal at a coupling between an end of the loop pipe (132) coupled to the discharge pipe 134, so as to prevent heat generated during operation of the compressor from being emitted therethrough (see col. 6, line 43-47); wherein the plurality of bent portions of the loop pipe 130,132 cause the loop pipe and refrigerant flowing therethrough to change direction a corresponding number of times; wherein the loop pipe 130,132 includes a plurality of straight portions extending between the plurality of bent portions (see configuration of 130 and 132 in Fig. 2).

Furthermore, while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function, because apparatus claims cover what a device is, not what a device does (Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990)). Thus, if a prior art structure is capable of performing the intended use as recited in the preamble, or elsewhere in a claim, then it meets the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 7, 10, 11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collings 6,176,688 in view of Roelsgaard 3,187,996.

Collings discloses the invention substantially as claimed. Furthermore, Collings teaches that the rotation shaft 42 includes an eccentric part 46 provided at an end thereof, wherein the eccentric part 46 is eccentric from a rotation axis of the rotation shaft 42; and wherein a plurality of springs (see Fig. 2 in Collings) are provided under the stator, wherein the plurality of springs absorb vibration generated during operation of the compressor. However, Collings does not teach the following claimed limitations taught by Roelsgaard.

Roelsgaard teaches a hermetic compressor having a pipe 21 connecting the compressor and the casing (fig. 2). The pipe 21 is connected to transit tubes 14a. The pipe 21 is made of a synthetic plastic having a thermal conductivity lower than metal in order to reduce heat transfer from the pipe 21 into the interior of the casing 2. In view of this teaching, it would have been obvious to make the pipe 130,132 of Collings of a synthetic plastic or resin having a low thermal conductivity. Regarding claim 10, Roelsgaard also teaches locating the motor in the lower portion of the container 2. In view of this teaching, it would have been obvious" to invert the motor/compressor of Collings so that the motor is located in the lower portion of the container and the cylinder block is located over the motor.

6. Claims 4, 5 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collings 6,176,688 in view of Na US 2004/0013550 (US Patent No. 6,835,050).

Collings discloses the invention as discussed above: regarding claim 5, Official Notice is taken of the fact that refrigerant tubes are, conventionally made of metal. However, Collings does not teach the following claimed limitations taught by Na.

Na teaches a hermetic compressor assembly comprising a discharge muffler 230, a transit tube 260, and a loop pipe 270; wherein the at least one transit tube 260 comprises a first transit tube coupled to a first end of the loop pipe 270, at a coupling between the first end of the loop pipe 270 and the discharge muffler 230; and wherein the at least one transit tube 260 reinforces a coupling between an end of the loop pipe 270 coupled to the discharge muffler 230 so as to prevent breakage of the loop pipe due to vibration generated during operation of the compressor.

Therefore, it would have been obvious at the time of invention to have modified the compressor assembly of Collings by implementing a transit tube between an end of the loop pipe coupled to the discharge muffler, as taught by Na, in order to allow for a quick and sturdy coupling of the muffler to the loop pipe (Na, col. 3, lines 53-58).

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collings 6,176,688 in view of Roelsgaard 3,187,996 and in further view of Yoshimura 6,152,703.

Collings in view of Roelsgaard discloses the invention as discussed above. However, Collings in view of Roelsgaard does not teach the following claimed limitations taught by Yoshimura.

Yoshimura teaches a suction pipe for an hermetic compressor that is made of Teflon. Teflon is a material having low heat conductivity (see col. 44, line 58). In view of

this teaching, it would have been obvious to make the loop pipe of Collings and Roelsgaard of Teflon.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Collings 6,176,688 in view of Roelsgaard 3,187,996 and in further view of Andrione 4,478,559.

Collings in view of Roelsgaard discloses the invention as discussed above. However, Collings in view of Roelsgaard does not teach the following claimed limitations taught by Andrione.

Andrione teaches a hermetic compressor having a balance weight 42 on the rotation shaft. In view of this teaching, it would have been obvious at the time of invention to provide a balance weight on the rotation shaft of Collins in view of Roelsgaard in order to reduce vibration.

Response to Arguments

9. Applicant's arguments filed 9/26/2008 have been fully considered but they are not persuasive.

10. In response to Applicant's arguments with respect to the newly amended portion of claim 1: Applicant argues that Collings neither discloses nor suggests that the first discharge muffler chamber 70 is a pseudo-discharge muffler, nor that it can balance a weight of the second discharge muffler chamber 102, as recited in independent claim 1. Examiner respectfully disagrees. The pseudo-discharge muffler, as defined by the present application, "may be used as a supplementary discharge muffler by connecting a pipe thereto if necessary." Therefore, the muffler 70 in Collings meets the definition of

a pseudo-discharge muffler and acts as a balance weight; thus Collings reads on the limitation: "a pseudo-discharge muffler positioned at a side of the compression part which is opposite the side at which the discharge muffler is positioned such that a weight of the pseudo-discharge muffler balances a weight of the discharge muffler."

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER J. BERTHEAUD whose telephone number is (571)272-3476. The examiner can normally be reached on M-F 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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